

# Heraclitus

By Stephen J Phillips

## Chapter 1 – The impossible artefact

His voice rang out loudly across the vast expanse of the plain on an alien planet. “Get over here fast. I think I’ve found an artefact,” called Frank Fielding to his companions. They were on a geological survey of their new home, the planet formally named Proxima Home in the Alpha Centauri system; or ‘Home’ as they had called it ever since arrival. The fifty-year voyage from Earth had achieved more than one tenth of the speed of light on the way. Travelling at such a rate would not have been imaginable even a few years before the start of their mission, because there had been no cost-effective form of energy that could have provided the acceleration required. Nor would it have been possible to generate an artificial gravity field that could prevent them from having their bones crushed in the process. Not possible, that was, until the scientists of project Ozymandias had taken the technology of cold fusion and added the controlling power of a singularity that gave them a virtually limitless supply of energy.

“Don’t be ridiculous, Frank,” said Erica Alder, the chief geologist, as soon as she and the others reached where he had been digging. He had spotted something strange on the monitor, while they were doing ground radar sweeps and the tall Nordic blond had told him to go and dig it up as much to keep him out of her hair as anything. In fact, Frank had only really been included in the trip to keep an eye on Dr Rebecca Nairn and her two children during the field trip. Rebecca had lost her husband, Charles – more properly Prince Charles, of Wales and a former member of the United Nations Council – during the voyage, due to the hostile action of a shadowy group called the Cult of Mithras. Frank had been Charles’s closest friend and sometime comrade in the Special Forces and he felt a special responsibility for looking after his former commanding officer’s widow. The two had a sometimes uneasy relationship because of the number of times Rebecca felt Frank had endangered her husband’s life – and the fact that he had lived when Charles was lost to her. For his part, he deeply respected this tall, striking brunette as one of the leading scientists of her generation and deputy leader of the mission. On the other hand, he adored her children; particularly her son, in whose upbringing he shared.

“You know as well as I do that there has never been any intelligent life on this planet, so how can there be an artefact?” Erica continued, nevertheless excited by the apparent discovery. There were no professional archaeologists on the mission, which currently consisted of about 260 individuals, selected for maximum diversity in terms of race, creed and expertise. One area that had been ignored in building the crew, although more by omission than any particular process of decision-making, was expertise in digging up the past. Nobody thought there would be any need.

“Actually,” said Rebecca, who had arrived slightly later than the others, being encumbered with her baby daughter, Elizabeth, and having had to stop to collect her three-year old son, Alexander, “that is not strictly accurate, Erica. When we ran the spectrographs, both on Earth and during the final approach from space, there was no evidence of industrialisation and we have subsequently seen no surface evidence of habitation, past or present. We cannot, however, rule out that there might once have been some form of intelligence here. Let’s see what Frank has found.”

Erica, a highly intelligent woman in her mid-thirties who was, as Frank put it to himself, easy on the eye, was scientist enough to accept the correction not as an admonishment, but simply as a statement of absolute fact. Suppression of ‘personality’ as a cult was one of the features that had emerged soon after the initial landing, when the five crews who had each taken two-year tours of duty – spending the balance of the voyage in suspended animation – were joined by the 200 supercargo crew members who had been in stasis for the entire voyage. As the mission leader, Professor Anton Savasin, had told everyone at their first meeting, “we are almost all scientists to some extent or other, so we must agree that no idea is ever to be rejected out of hand. When someone says something with which we disagree, we must listen and decide whether it is provable, can be challenged in a reasoned way, or is something that sparks a better idea that can be discussed.” This ruling, one of the few that he ever made in this democratic society, was generally recognised as a positive way forward. In this settlement, there was no place for egos; the whole point of creating a new way of life was for everyone to cooperate and for nobody to take a leading position. For that reason, only academic titles, not civil or military ones, were ever used. And to be honest, even these were rarely referred to.

As Frank gently removed the dust from the cylindrical shaped object he had found, faint markings became visible. At each stage of the cleaning process, images and measurements were taken to record precisely where it was found, in case the information was to be needed for future reference. “Not that there are likely to be any claimants for ownership,” quipped Frank. “I suspect that this has been in the ground for a very long time.”

“You could be right,” smiled Rebecca who as chief scientist took whatever precedence that might exist within the settlement, “but we don’t know how long-lived whoever made this item might have been,” she added reasonably. “Have you any idea what this could be, Frank? You have been working on it for the longest time; any intuitions yet?” It had taken him more than an hour to ensure that it had been fully exposed and had so far made no attempt to remove it from the soil that surrounded it.

“Not really,” he replied. “There are some markings on the surface, but to be honest, it is impossible to tell whether they are pictures, ideograms or some form of conventional writing. Without a Rosetta Stone, I don’t see how we will ever be able to tell,” he added.

“Even without an archaeologist amongst us, Frank,” replied Erica, “things have moved on rather a lot since the end of the eighteenth century when that was found. So even though we

have no context for the markings, we may at least be able to discover what it is for; what it does. Perhaps Rebecca and her colleagues in the science academy will be able to identify some purpose for it,” she added.

Frank looked at Rebecca and Erica, ignoring the others, who were standing around watching him work and gestured to Alexander who, at a precocious three and a half, was interested in absolutely everything. “Why don’t you come and help me, Alex?” he asked, adding to Rebecca, “I don’t think it is going to be heavy and I won’t let the lad hurt himself.” She nodded her permission and the toddler bounded over to his favourite uncle to help – or hinder, depending on your perspective. As Frank had surmised when checking underneath for booby traps – a hangover from his military service – the item was relatively light, about a metre in length and perhaps 15cm in diameter. The ends were domed, so that there was no natural weak spot for corrosion to act on an exposed surface, but the markings were largely concentrated round the centre of its length.

“Striches,” shouted Alexander, using the name he had given to the first large animals they had seen on Home, a flock of migrating birds about the size of Ostriches. That had been about a week earlier and he had misheard one of the settlers describing their size and the name had stuck. Everyone looked towards the broad, slightly pinkish-blue sky of the plain on which they were working, to see where he might have seen this still rare vision.

“Where are they darling,” asked his mother, since nobody could see anything above them.

“There. On Uncle Frank’s tube,” he said in that slightly impatient voice that children use when adults fail intuitively to follow their train of thought. He pointed at the faint ridges and indentations on the artefact that Frank was cradling in his arms, not because of the weight, but to protect it against accidents should it prove to be fragile. As the adults focussed, they eventually saw what clearly did look like a simplified image of the large avian they had seen previously.

“Alexander must have very good cognitive skills to have identified that from the visible markings,” said one of the younger scientists, impressed. “I must admit that I can only just see it now that I know what I am looking at.”

“That might be my fault,” said Frank. “One of the games that Michelle, Anita and I used to play with Alex when he was little on the voyage – while Rebecca and the rest of you were planning for the landing – was to look at images of earth animals and comparing them with hieroglyphics from Ancient Egypt.” This had been something that Charles had asked Frank to do, before his loss, in order to ensure that the boy had at least some experience of non-European cultures. “It seems that those games have enabled his brain to decipher what to me still looks like a jumble of lines. Can you see anything else, Alex?” he asked gently, not wishing the child to become self-conscious about being the centre of interest and thereby close up on the questions.

The response was startling. “Hippo ... man,” Alexander said back to him.

“I hope that that was two separate words,” joked Frank, “not a description of one animal.” He knew that this must be the case, because everything Alexander was able to describe was something he had seen in the books; something that looked like a cross between two different things would be beyond the child’s imagination, at least at this stage.

Rebecca and the others ignored his comment, because the import of what Alexander had said was immediately apparent to them. Not only were there large animals on the planet, but there had also been some form of bipedal humanoid – at least they assumed the past tense was appropriate. The key questions were: when were they about; where had they lived – and how. And, perhaps most important of all, what had happened to them, that there was no longer any trace of them at all.

“We need to get this news back to Anton and the others at once,” said Rebecca. “They will automatically have received copies of the images we have taken, but it is unlikely that anyone will have taken any notice of them so far.”

”Yes,” replied Erica, “nobody is likely to have thought of monitoring the activities of a geological survey, so we are probably the only ones to know what we have found. Rebecca, why don’t you and Frank take the children and this find back to the habitation, while the rest of us carry on with the general exploration here?”

This seemed a good idea, especially as Rebecca was concerned that the excitement might prove too much for Alexander. Anyway, the breeze was starting to chill Elizabeth, who although snuggled up against her mother, still had her head exposed to the elements. Not that it was particularly cold; the settlement site, to which they were relatively close, had been selected specifically as being in a temperate region of the planet on a broad blue-grassed plain, a dozen or so miles from a mountain range and close to a river. As they got into the halftrack vehicle that had been allocated for Rebecca’s use during the survey trip, Frank was careful to pack the cylindrical object as far away as possible from where they would be sitting; just in case of radioactivity – or any other threat – he thought to himself. They drove back to the main habitation, which consisted of the space craft, the Nelson Mandela, and the largely prefabricated additional buildings that had been linked together with the craft itself in order to provide more varied accommodation than had been available to the crews during their two-year duty rotations.

Once the basic facilities had been constructed, the settlers had paused while they decided precisely how they wanted to develop their society. Many favoured a single group of buildings consisting of individual buildings for those who wanted to live alone, or in small family groups, while those who had yet to establish longer-term relationships remained in the comfortable surroundings that they had created for themselves. Some of the supercargo – those who had spent the entire journey in stasis – were already in some form of relationship with one of the others; several married couples had decided to apply to travel together and this had been encouraged by the founding minds behind the mission, on the basis that this was likely to result in the early procreation of children, to help grow the settlement quickly. It

was part of their thinking that there was no guarantee that there could be any follow-up flight for decades, even centuries, so the settlement had to be self-supporting in every way. This included ensuring genetic stability, so in addition to encouraging natural reproduction, every person on the mission other than the 60 or so crew, who had each spent more than ten years of their lives in space flight and deserved a little more flexibility, were asked to have one or two babies using the thousands of eggs and sperm samples that had been randomly selected on Earth and carried deep frozen, once they had had one or two children of their own by more conventional means.

The decision went far beyond simply genetic diversity that would include representatives of all races and genetic groups within humanity in the new settlement. An important secondary purpose was to ensure a wide range of inherent skills and abilities. Specifically, to provide a broad range of artistic and musical skills that might not be represented within the crew or supercargo. It had long been known that such skills are as much inherited as learned and having a society that truly represented all that was best within humanity was a core value of the settlers.

As to the physical nature of the settlement, one section of the population seemed to prefer largely communal living for the longer term, whilst some – particularly those involved in agriculture – suggested greater separation of habitations. Decisions were yet to be made and would depend on personal preference, as well as consensus.

The drive to the settlement didn't take very long; Frank was a careful driver, especially in view of his precious cargo, but he was also driving on a surface that, while it had no made up roads, was perfectly even and over which he had driven before. He was therefore able to proceed relatively quickly. The smoothness of the valley through which the river they had settled next to ran, was something that had surprised the geologists on the mission. As Erica had told them at one of their earliest meetings, a smooth valley floor usually suggested glacial action, since river beds generally cut more of a "V" shape into the terrain; either fairly straight, or mildly meandering, depending on whether the fall in ground level was rapid or more gradual. In this case, the descent was relatively slow, which might have suggested a meandering course with relatively shallow channels. What they actually saw was a straight course with rapidly moving water. It had initially been thought that this was due to it being the outflow of a glacier in the mountains some twelve or so miles away, but Erica had been unsure and the jury was still out, pending more evidence. Now, Frank wondered whether this might actually be an artificial water course, given his recent discovery.

By the time Frank, Rebecca and the children got back to the settlement, Anita Patel – an attractive light-brown skinned slight woman who had served on the Nelson Mandela as a medical doctor and got to know Frank, Rebecca and her late husband, Charles, very well – was already waiting for them in a state of excitement. Anita had always taken an interest in what Frank was doing, despite Rebecca's fears that she was wasting her time because she felt that Frank was 'not the marrying kind', and was the first to realise that something very

exciting must have happened on the expedition. Rather than alerting the others, she had visited the control room and seen from the tracking system that one of the vehicles was returning to base at high speed. Only Frank would drive that fast, she thought, so she estimated their time of arrival and went out to greet them.

“What brings you back so quickly?” she asked Rebecca, as she helped get the children out of the vehicle. She and Frank, along with Michelle Huse, who unlike Anita had served in the same crew as Frank and Rebecca, were unofficial guardians to the children and would be increasingly so as Rebecca took her place on the guiding council in a few weeks’ time. “Has Frank been misbehaving and been sent back in disgrace?”

“Well, almost,” replied Rebecca, smiling, before Frank could spring to his own defence. “He has taken something that clearly does not belong to him; he is getting it out of the vehicle now.” Anita’s obvious pleasure at seeing Frank sent his already ruddy complexion almost scarlet, but he pretended to assume that this was more to do with what he was carrying than simply seeing him. He was actually very fond of Anita; they had spent a lot of time together with Alexander, during the difficult period after the loss of Charles, and had grown to care deeply for her. But he could not imagine that she reciprocated his feelings. This was partly due to the fact that few women ever looked at him twice and Rebecca, in particular, had been unfriendly towards him for much of the first five years that they had known each other. This was largely based on the fact that she had held him largely responsible for some of the injuries that Charles had suffered, both on Earth during the freight planning period for the mission and subsequently during the voyage. He did not recognise that she had subsequently come to rely on him in so many ways and to trust him as much as she had Charles. She would never marry again, she was certain; but Frank was a constant that she had started to depend on.

“Look what Uncle Frank found,” chirped Alexander. “It has pictures on it.”

Anita was stunned. Everyone knew that Home was previously uninhabited – at least by intelligent life. She moved so swiftly over to where Frank was walking towards her that they almost collided; something that Frank would not have objected to, had he not had the tube in his arms. “May I look at your new toy?” she asked him. “I must see the pictures.”

“It’s got Striches, Hippos and a man on it. Show Auntie Anita; show her, Uncle Frank,” said Alexander, whose excitement was starting to infect Elizabeth. The baby became fractious, so Rebecca said she would take her inside their cabin, while Frank reported to Anton and the others.

“Would you mind taking Alexander with you, Anita?” she asked. “I want to change and feed Lizzie.” This was a good suggestion because there was no way an inquisitive three and a half year old was going to be kept away from the action. He became rather subdued, however, as he realised that they were going to see Anton. It was not that the old man had ever done anything to frighten Alexander, more that his great age, compared with everyone else in the settlement made him uncomfortable. To a boy of his age, everyone over fifteen,

which was everyone he had ever met, other than his little sister, was 'old'. But Anton fell into a different category altogether. He was naturally less openly friendly than most of the others and more austere in his manner. This was partly due to his Russian ancestry and partly because he had carried the burden of command during the entire voyage; and because he had been older than the others to start with. Of course, he should only have been awake for two and a half years at each end of the journey but, as an emergency half way through the voyage demonstrated, he was also 'on call' for the remainder of the mission and he had been awake for more than a year then, meaning that he was physically much older than anyone else in the settlement. This was one of the reasons that he had altered the mission plan so that he did not retain sole command for two years after the landing. Instead, he had worked with the four Captains of the other crews in council for six months and they were all handing over to their Pilots – who had acted as their deputies – six months after the landing. It was in this capacity, rather than as Chief Scientist that Rebecca was about to join the new council, for a year. She was confident, however, that she would be able to undertake some scientific research at the same time. After all, she reasoned, how much time could managing a settlement of fewer than 300 souls take?

Anton listened carefully to the tale Frank related, of the discovery and what Alexander had seen. When he had heard all they could tell, he said: "I know my eyes are not as good as they once were, Frank, but I could not see the patterns as images until you told me. Alexander must have very good eyesight – or a totally uncluttered mind," he added thoughtfully. "This had massive potential ramifications for us; not least that, if there is a civilisation here, do we have the right to remain, or should we press on and find an alternative planet to settle?" Nobody, Anton included, could really face another fifty-year mission; but the settlement was not about colonisation. Earth history, they all knew, contained too many examples of civilisations thinking they had the right to impose themselves on others in the name of progress. This was an important discovery and if whoever made the artefact that Frank had dug up was still about, the settlers would either have to move on, or come to some sort of accommodation with the 'natives'. "Let's hope they are extinct," he added aloud.

By the time everyone had assembled to discuss the day's events, dusk had fallen; at least what passed for dusk on Home. The star about which the planet orbited was actually part of a triple system, so while there was a natural daylight cycle, even in the depths of night, which lasted slightly less than twelve hours at the equator and varying times in the temperate latitudes at which they had settled, there was almost always a very bright light from one or other of the two other stars in the system; not sufficient to read a book by, but certainly sufficient to see objects clearly at night. Only under certain alignments were nights completely dark.

Rebecca had quickly assembled a team of scientists to look at the object and see if they could determine what it was – and whether it might represent any form of threat. Anton and his colleagues on the outgoing council had also considered the possible meaning of its symbols and the moral issues were something that needed to be discussed in open forum. No

longer could society have an elite who did whatever they thought was best for the rest of the population; on Home, everyone had an equal voice – and vote, should the need arise.

“Rebecca, have you and your team anything to report?” asked Anton.

“To be honest, Anton, very little,” she replied to her old friend and – since the death of Sir Julian Crichton who had been their colleague and her boss while they were still on Earth – something of a mentor to her. “There is nothing whatsoever to suggest that this represents a physical danger to the settlement. Our tests show it to be completely inert; there are no electrical or other fields that we can detect; and I am confident that we would be able to do so. There are no apparent openings and the only effect it has at all, is that Elizabeth seems soothed whenever she is near to it. I suspect that this is coincidence, but we should not ignore the possibility that it projects some form of psychic field that is beyond even our instruments to detect. For this reason, I suggest that we hold it securely, away from the main settlement.”

“Do we need to put up a ‘Lost Property’ sign over it, in case anyone comes to reclaim it?” asked Brad Gregory. A former journalist who had retrained as a nurse in order to make the trip Brad, along with Frank, was a self-appointed humourist in the settlement. Nobody minded, because the two were not only popular, but both also avoided being intrusive; they simply used their jokes either to emphasise a point, or to break the occasional tension that must inevitably arise even amongst friends. During the early part of the project and the voyage itself, all the members – with one or two notable exceptions – had been precisely that; friends. Now that all the crews and supercargo were living together, there were bound to be occasions when views differed about what to do for the best and having some minds that could see the funny side of most situations sometimes helped. But because all the settlers were open-minded, disagreements generally tended to be over details, rather than principles. This was perhaps just as well, because the next section of the debate was likely to be more contentious.

“We have been unable to ascribe any meaning to the images on the object,” reported Anton. “Indeed, the interpretation we do have is down entirely to the observations of a three year old. It is interesting to note that nobody, on first seeing the object, has been able to discern anything, until told what Alexander said. I have tested this on a large number of people, and it is true. Either he had acute observational powers, or there is some other agency at work. It is for this reason that we must consider the possibility that those who manufactured this object – and there is absolutely no doubt that it is a manufactured artefact – might still be around or may have been very recently and left evidence for someone to find. It just happens to be us. The question is: who were they and what did they want to say?”

These were intended to be rhetorical questions; nobody could possibly know the answers, at least at this stage. In asking them, Anton wanted to start a structured discussion about the morality of what they were engaged in, which could even prove to be tantamount to the colonisation of an inhabited planet; something none of them had signed up to. The first to respond was George Matan, a former submarine commander in the South African Navy, who

had served as one of the Captains on the voyage from Earth and was now responsible for planetary exploration.

“The observations we made from orbit make it unlikely that intelligent life currently exists on the planet, nor is it likely that there has been any for centuries – even millennia – otherwise we would have seen some evidence,” he suggested. “Unless, of course, they were subterranean dwellers; but even were that the case, we should have seen some form of ventilation or access hatches. They might, of course, be underwater dwellers, but if so why leave evidence of themselves on land; we would not have left proof of humanity’s existence on Earth under the oceans, so why should an aquatic species have done so on land?”

“Perhaps they would not have,” replied Michelle, an exobiologist, before she had acted as one of the mission’s medical officers. “But in any case, the possibility of evolution of intelligent life forms under water that use tools and make artefacts is something that zoologists on Earth have long discounted. The general view is that the manual dexterity required to manipulate objects with sufficient accuracy is inimical to underwater conditions. At the very least, the pressure gradient under water is far steeper than in the open air, so the practical operational range of any appropriate animal would be severely limited. Take dolphins and other cetaceans, for example; they are certainly intelligent, as evidenced by their family structures and communications. But they never resorted to creating tools. Conversely, some lower life forms in the avian sphere have developed the use of primitive tools without the same level of intelligence.”

“You mean like birds using twigs to root out grubs from trees?” asked Clarissa, who had grown up in the Cuban countryside. “But this raises a question about what we consider to be intelligence. Is it simply the use of tools, or communication, or something more complex?”

“In a way, this is one of the most basic questions that humanity has ever asked – and probably failed to answer satisfactorily,” replied Michelle. “Some philosophers have suggested that the development of higher mind functions is directly correlated with adopting speech patterns that allow the communication of abstract thought. If this is the case, then we observe another inhibition to the development of what we interpret as being ‘intelligence’ under water. While dolphins and whales can send messages over vast distances in Earth’s oceans, these tend to be fairly basic, as far as we have been able to interpret them. There is more work to be done by those who remain behind on Earth, but I think we can discount an underwater civilisation here, until there are no other options.”

“I suppose one alternative might be that the artefact was left by visitors from another planet, just as we are,” suggested Brad, returning to his fertile journalistic mind-set. “But all this does not preclude the option of a troglodyte community living below ground.”

“No,” replied Anton, “but as George says, we have so far seen no trace of such a group. At the very least, we would have expected to see some evidence of industrialisation within the spectrographic data taken in the run up to landing. We had been carefully looking for something of this nature all the time and there was nothing.”

Nobody had much else to contribute at the moment and it was getting late, so Anton decided to wind up the discussion.

“I suggest that, in the absence of any evidence to the contrary, we continue to develop our settlement here,” he concluded. “But with a firm understanding that we must be ever vigilant for any evidence that intelligent life remains and that, should we meet any, it is we who are the interlopers, not they.”

“Before we break up for the evening,” interrupted Michelle, “I want to consider the question of larger life forms such as Alexander’s ‘hippos’. I can see how he interpreted the image on the cylinder as a large African mammal – although its actual appearance and lifestyle are likely to be dramatically different from those on Earth – it raises the issue that we have not so far observed anything of this size where we currently are. This might, of course, be a matter of chance but given where we have been living for the past five months – besides a river apparently abundant with life, in a temperate climate – I would have expected to see some evidence of large animals sooner or later. This leads me to suspect either that they did live here but have become extinct (at least locally) or do not live here at all, because it is not a large enough island for them. I must say I consider the second option unlikely, because this is about the size of France and large animals roamed there in prehistoric times.”

“Surely, those animals could have entered France from anywhere in Europe, or Pangea prior to the continents drifting apart, if we go far enough back,” countered one of the others. “So that analogy is invalid.”

“No, I accept your point, although we do not know how long ago continental drift might have affected this planet,” replied Michelle. “However, as a working theory, I suggest that either they were here and have been hunted to extinction, or the artefact comes from somewhere else. No, Brad, not from outer space,” she added, as he drew breath for his inevitable quip. “Probably from one of the other two continents, both of which are much larger, more like Africa or Asia. If that is the case, not only was intelligent life about, and able to manufacture sophisticated objects with advanced decorations, but also that they were able to roam the planet at will; no mean achievement, when you consider how very far we are from the other land masses; as least as far as across the South Pacific.”

“A fair comment,” said George. “But we know that ancient mariners on Earth traversed vast expanses of ocean in primitive craft, so I do not think we can ascribe global travel such a high score in intelligence rating.”

“True,” replied Michelle, “but my main concern is more about finding what we can about the animals themselves and whether they – and others of the same size – might still exist on Home; and if so where.”

“That sounds like a project for the not too distant future,” concluded Anton, “and one which I am delighted to say, I will not have to decide on, as my term in office ends next week and Rebecca and the other former Pilots take over for a year. At the end of that period, there

will be open elections for a six person council, but I have no intention of standing; I want to go back to focussing on Academia and forming the first university here.” This was by no means unexpected. The decision to found a university on Home might have appeared perverse, given that there were no children who had completed primary and secondary education who would need one now; nor would there be for decades to come. However, the primary function other than teaching for any academic institution is research and this was better organised within some sort of structure, to ensure the exchange of ideas and the avoidance of duplication of effort. In addition, many of the settlers had already expressed a wish to retrain in new areas. Everyone was expected to participate in all aspects of the settlement’s life, including the basic tasks that had to be undertaken wherever people live together, such as building, farming and sanitation, and so on. This did not, however, preclude people from wanting to achieve personal development and intellectual growth. It was important to the success of the settlement that individuals were able to set and achieve their own goals, while contributing towards the common good. It was for this reason that founding the university had been such a high priority.

“With that, I wish you all a good night,” concluded Anton and they all went to bed, excited by the prospect of whatever might come next.

## Chapter 2 – Meeting the locals

*“This unit will self-destruct in one hour,” said the voice from within Charles just as the last vision of Rebecca and the Nelson Mandela faded from his view. He supposed that the sight she saw was of him fading at the same rate. It had taken half an hour for the energy that had to be drawn from the massive black hole at the galactic centre to enable the teleportation system to first disassemble the atoms within his body, and then move them untold trillions of miles to the black hole, before reassembling him inside the event horizon.*

*There had been no option but to use this completely untried technology that he had been largely responsible for developing, to get him off the space craft. Otherwise, everyone and everything on it would have been destroyed by the miniature but powerful explosive device that had been welded to his spine, close to several vital organs, long before they had ever left Earth. A message sent by the leader of the Cult of Mithras, after the failure of earlier plots to prevent the mission’s success, had triggered the device, giving the crew a twelve-hour audible countdown to their inevitable destruction. Even the extreme option of ejecting Charles into space so that he might die alone had been impractical, because the sudden change in gravity would have caused an immediate explosion. Charles had reasoned, however, that being teleported into the heart of the galactic black hole would trick the mechanism into not exploding before the end of the countdown, and he had been proved correct. It was not that he wanted another hour or so to live, more that this was the only way to get him sufficiently far from the craft that the explosion would not destroy it and everyone he loved, as well as himself.*

*“This unit will self-destruct in fifty nine minutes,” intoned the mechanical countdown.*

*“Oh, God,” thought Charles to himself, “the evil swine have decided to torture me for the last hour with a minute-by-minute countdown. Inside a black hole, it may seem like an hour, but for anyone observing from outside the event horizon, it would be an eternity; quite literally. Thank heavens Rebecca is not about to know what is going on, or she would be even more upset.”*

*He tried to understand her last half-heard words to him as the ship and she finally dematerialised. Could it be that they were expecting a second child? The months he had spent with Rebecca and Alexander prior to his enforced departure from the ship, after thirty years of separation from his wife, while she carried their firstborn in stasis, had been amongst the happiest of his life. During those thirty years, he had endured a long and lonely voyage accompanied only by the succession of crews, brought out of stasis in rotation. These months had been almost as good as the four years he had enjoyed with Rebecca, after their initial meeting when she had announced project Ozymandias to the United Nations more than half a century earlier. Their whirlwind romance had started the same evening and they had hardly been apart since then, until the first attempt at sabotage almost twenty years into the voyage had caused the injury that prevented him from returning to stasis himself. The thought that*

*they were to have another child – he so much wanted a daughter – filled him with joy. He only had fifty eight minutes to live, but Rebecca would have a lifetime with two children by which to remember him. He was not concerned for her safety; he knew that Frank would look after her and there were so many others who loved and admired her that she need never be alone. But not being able to share more time with Rebecca was a matter of deep disappointment to him; as was never seeing his child – or children – grow up. Not that he had expected to see much of Alexander, he was already well into his seventies and despite improvements in medical care, the injuries he had sustained on several occasions throughout his life made it unlikely that he would have lived for more than a further ten of fifteen years, at best.*

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Not long after the meeting, Rebecca and her ex-Pilot colleagues took over control of the settlement's council. The handover was deliberately low key and, to be honest, there was not – at least initially – too much to be done so she was able to spend quite a lot of time with Alexander and Elizabeth. As her daughter became less dependent on mother's milk and her son spent more time with Frank, she started to feel that she needed something more than a few scientific experiments and a bit of administration. It was time, she felt, to talk to Anton about the creation of the University that he had been planning.

“What exactly had you in mind, Anton?” she asked him one morning, when neither had anything else in particular to do.

“I have been giving this some thought for a long time now, Rebecca,” he replied. “What I want to do initially is to establish an institution with two Faculties. One would be for science, incorporating all the physical sciences and suitable research facilities; the other would be for all the arts, ranging from fine art – what a pity Charles is not here, his paintings on board the Nelson Mandela were really popular – to literature, philosophy and so on.” Rebecca had reached the stage where discussion of Charles and his many talents was no longer quite so painful as it had been when he was transported off the ship at such short notice, but was beginning to become cathartic. “We are not yet sufficiently large a settlement to cope with too much structure, so I have in mind that we should have two Deans, one for each Faculty and that the Chancellorship should alternate between the two posts on an annual basis.”

“I know you are keen that the arts are given equal status with science,” replied Rebecca, “so that sounds a very good idea. Who would be the first Dean of the Arts faculty, assuming that you are still happy to lead the science one?”

“Yes, I have plenty of work left in me – and many projects that I wish to undertake – so I will certainly do so,” replied the Russian. “In any case, I am keen to distance myself from running the settlement itself after so long in charge, and this will keep me well out of

everyone's way. As to the Arts Faculty, I suggest that the council might like to consider Henry Yates. I am not sure if you have met him, Rebecca. He was one of the supercargo and a deliberate choice as someone with no scientific knowledge or interest; well not more than was required to operate in the relatively high-tech environment that we left on Earth.

"You mean he knows how to activate a computer terminal," replied Rebecca.

"Ouch! Can I get you a saucer of milk, miss pussy?" replied Anton, whose command of idiomatic English was legendary. "Actually, he is an experienced academic, he has already written a number of historical studies about the early development of several African nations, which given the limited amount of written primary sources available to him shows some prowess. I was surprised that he wanted to come on this trip, given that there is no history to uncover – well, at least, we didn't think there would be until Frank went digging about – so I challenged him on this. Apparently, his experience in writing about civilisations that did not leave written records left him determined that this should not happen again; specifically in respect of our settlement on Home. He wants to document everything we do here so that future generations will not have to rely on hearsay and tradition, or trawl through our scientific papers, in order to understand what we did, and why."

"That explains what Brad Gregory has been up to," said Rebecca. "I gathered that he was trying to create a news media source and could not understand why he felt that returning to his journalistic roots was worthwhile in such a small community. If he is thinking of ways of leaving a permanent record of everything we do, as a basis for what Henry wants to achieve, then this makes sense. Clearly they are already cooperating, so I suggest that we formally rope Brad into the Arts Faculty, too. I don't suppose he really wants to retain his nursing skills; there are plenty of others for that and they will be part of the Science Faculty, in any event."

"That is an interesting point, Rebecca," said Anton. "I do not want to see everyone as part of one or other of the Faculties; that could be divisive. The University is there for those who want to undertake research or to teach; it is not to become something that everyone belongs to, or it could become a power-base for the future. I still want us to guide the settlement towards a completely egalitarian society, where everyone is valued for themselves, not what they do. For me, Clarissa Ramirez and the other farmers are just as important to the community as Brad as a journalist, or you and I as scientists."

Over the course of the next few months, the University attracted a number of specialists in a variety of fields who wanted to undertake pure research and were also prepared to teach others, as the need arose. Gradually, a steady, but modest, stream of people presented themselves wanting to learn new disciplines; but there was no pressure on anyone to do so. All that was required of the settlers was that they undertook some work on behalf of the community. For some, this represented focussing all their time and energy into farming and Clarissa was one of the leading lights in this field. Her early childhood had encompassed living on a subsistence farm on Cuba and she had a natural affinity for animals as well as

crops. During the long voyage, she and a succession of other horticulturalists had provided the fresh food that had been essential to the wellbeing of each crew, as well as overseeing the storage of the embryos that were now starting to be used to provide additional livestock, while ensuring sustainability and genetic diversity within each breed. Other settlers started to provide some of the more basic services that any community needs, such as hairdressing, the provision of stores for people to obtain essential goods and so on. It was of paramount importance to the community that it should be cashless. No goods or services were sold; all were simply available for use as required. Most ‘manufactured’ goods could be provided by the powerful 3D printers that had sustained the crews for half a century and now produced almost whatever was required in unlimited quantities, thanks to an abundance of energy. In the event of shortage, such as should a crop fail – or a particular delicacy become available, but in short supply – people would simply cooperate and share. Frank, who knew a lot about human nature in practice, was amongst the first to wonder how long such an approach might prove sustainable, but he kept his views to himself. After all, this was a new beginning for humanity and it should be given every opportunity to succeed without needless concerns being expressed about human nature – or greed.

Brad, who had also seen as much of human nature as anyone during his journalistic career, was similarly concerned and raised the issue in private with Frank one day, while both were having a rest period. It was a hot day and some of the others were having a picnic down by the river, while Anita was teaching Alexander how to swim – giving Rebecca time to spend with Elizabeth, an increasingly rare commodity as she became more involved in the administration and some personal scientific research.

“How long can any society last – or expand – without some form of trade, based either on barter or money?” Brad asked, largely rhetorically, because he suspected that nobody had an answer to the question.

“I don’t know, Brad,” replied Frank, luxuriating in the gentle zephyr. “I suspect that there is an element of idealism – or even blindness to human nature – amongst some scientists preventing them from seeing that not everyone is motivated by a concept of the ‘common good’. While we were on the voyage, the issue of money was irrelevant. Here on Home, it rather depends on how frequently it is that some people cannot get whatever they require – as opposed to what they actually need – before one or two of us try to gain a monopoly over some resources. When that happens, the ‘profit motive’ raises its head.”

“Based on my own observations of humanity, I am afraid that that is rather what I suspect,” said Brad, “but I would like to think that we are wrong. After all, we are here to start a new type of society, one based on scientific principles. If we can succeed, then surely reason must win out over greed?”

“You may be right, Brad; at least I hope so,” said Frank, “but whatever happens will only do so because we make the effort ...”

His last words were drowned out by a piercing scream from the direction of the river bank, followed by a lot of shouting and the sound of a stampede of feet. Frank's natural instinct was always to run towards danger; it came from his military training, as well as the knowledge that both Anita and Alexander were where the noise was coming from. He rose to his feet, quickly followed by Brad, and ran swiftly towards the river. Weapons were unknown on the planet; they were basically unnecessary, but Frank always kept a large knife concealed about his person wherever he was. He was never entirely satisfied that there were no further potential saboteurs on the mission and nobody knew when they might encounter a larger – and potentially more dangerous – member of the local fauna. As he neared the group in the river he saw Anita, her skimpy dress dripping with blood and a frightened-looking Alexander clasped to her chest. He looked past her to see what looked like the log of a small tree floating in the water a few metres away from them. His initial instinct was that this was some flotsam that had scared the lad and that Anita had torn her skin in extracting him from it. As she thrashed about in the water, uncharacteristically for someone as self-possessed as she generally was, he realised that she was fending-off the object from herself and her charge. That did not make sense, until it opened its massive jaws and tried to take a bite out of her flailing arm. He had no time to think; only to react. Shouting to her to stand her ground for a moment longer, he plunged into the relatively shallow water and lunged towards what was clearly an animal. Frank had time to register that it was similar – very similar – to a Nile crocodile and work out a strategy for overcoming it. At three meters long, much of which was made up of its snout and tail, it was not too large for him to handle. He was fifty, now, but kept fit and was well trained for jungle warfare; amongst other things. He tugged on its tail and then waited until the animal had closed its snout on fresh air, instead of Anita's arm, rapidly moving his grip so that he was able to grasp the long snout. He reasoned that if it looked like a crocodile, it may have the same weakness; that all its musculature was designed to close, rather than open, its mouth. He was in luck; gripping the long, narrow protuberance, he was able to prevent the animal from opening its mouth again. Surprisingly, it also made the animal instantly docile. On Earth, the manoeuvre would only have prevented the beast from biting; it would still have had its massive body strength and claws as a way of fighting back. For some reason that Frank had no time to consider now, it used no other form of attack. It didn't need to. It was only the vanguard of a pack of similar river dwelling animals that were close behind. These started to attack the one Frank was holding on to and this gave him and the others time to escape from the river. With crocodiles, the danger would not yet have passed as they could easily pursue their prey onto the river bank. In this case, however, there was no chase and once on dry land, the entire party was safe.

“Frank,” shouted Brad to his friend, who was still at the waterside watching the melee “if you still have your knife, can you catch one of the smaller animals at the back of the pack, for us to look at? But for heaven's sake, don't take any unnecessary risks; we were lucky to get away without anyone getting seriously hurt the first time.” While Frank carefully selected

what looked like a juvenile from the pack that seemed to extend up-river for ever, Anita shouted to Brad.

“You speak for yourself, Brad,” she said. “My dress is ruined and I have several gashes in my arm that could go septic. You are a nurse; get me some antibiotics and a bandage for first aid. And someone take hold of Alexander so that I can check him for any cuts or bruises.”

Within minutes, the thrashing about in the river was history, as Frank extracted his gently struggling trophy from the water, by its tightly closed snout and everyone else fussed about Anita and Alexander. By now Michelle Huse, who was never very far from Alexander, had caught up with the commotion and gone to see how Frank was getting on.

“My God,” she exclaimed to Frank, as he dragged his specimen out of the water. “If it had feet, instead of fins, it could easily be a crocodile. It almost resembles a river pike but is much larger, perhaps three or four times the body mass. No wonder Alexander had been shouting ‘crocodile’; and it was just as well that he did, or one might have taken him before Anita got there. At least that is why they have not followed us onto dry land; they must be whole water dwellers.”

Frank did no more than acknowledge her comments before dropping the animal on the ground – well away from anyone – and rushing over to see if Anita was hurt. “That was really brave of you, Anita,” he said to her. “Going to Alexander without knowing what was attacking him took real courage.”

“No more than you displayed coming to our aid, without a moment’s thought,” she replied, looking into his eyes. “We would both have been gone had you not dived in to help us.” Frank did not think this was a good time to explain that his training had kicked in and he had not made a conscious decision to act. He would rather bask in the reflected glory of her smiles. They had known each other for some time, although Anita has not been one of the original project team in Cuba, so he knew Michelle and the others better. He had been revived from hibernation to help Charles fight an act of sabotage half way through the flight from Earth, and Anita had been the doctor who had treated them both when injured, as well as staying on to look after Rebecca and see her through her pregnancy with Alexander. That was one of the reasons why she was so close to the boy; Frank had never suspected that she was also interested in getting to know him better. But why should he suspect it; he was almost twenty years older than her and no ‘catch’, as he would have put it himself. He was always surprised that he had been included in the mission; he was not a scientist, although a useful computer engineer. But Frank was not really the pioneering type, he felt, being more accustomed to combat than exploring.

He took an unaccustomed risk. “I would do anything for you; I mean for Alexander,” he pretended to correct himself, just in case he had misread the situation.

“I know exactly what you mean, Frank,” she replied, certain now that her interest in him was reciprocated. Fortunately, women are far more perceptive about such matters than men

are. “You are a very poor liar ... but I feel the same way about you; and about Alexander, too, for that matter. So give me a hug, to warm me up.” Neither of them pointed out that the air was so warm that her clothes had already dried out. And nobody else noticed that once Michelle, who had served as a doctor on the flight, although she now generally focussed on zoology again, had checked over both Alexander and Anita, the two of them had quietly gone back to the habitation for a quiet moment together.

When she was free to look at Frank’s captive, Michelle was surprised to notice that it was still breathing. She decided to get some of the others to fabricate a holding tank that she could put it in for further investigation. “Make it about a metre longer than the Crock,” she said, inadvertently giving it a name that would stick, “so that it can move about a little, but not too much; we don’t want any more accidents.”

As soon as it was fabricated – the settlers used 3D printing for just about everything, which was why there were seldom any problems with resources – Michelle got together those scientists who were interested in biology for a discussion; although many of the others turned up as well, as a sort of audience for a college debate.

“The first thing we notice is that this air breather is entirely restricted to water by its lack of legs,” she started. “In this regard, it is similar to a dolphin or porpoise. Its teeth, however, are more reminiscent of a shark or pike, while its snout resembles that of a crocodile. This is clearly an evolutionary issue.

“Could this mean that we are looking at something analogous to the first creature to move from the sea to dry land on Earth?” asked Jennifer Downey. She too was an exobiologist who had travelled from Earth as part of the “A” crew, having transferred from the United Nations Space Agency relatively early in the project as assistant to Dr Ernesto Xavier, a Jesuit priest-scientist who had given his life trying to prevent the mission being sabotaged. “Just because other forms of more advanced life appear to have developed here does not negate the possibility that one of the transitional animals has survived.”

“That is true,” replied Michelle, to her friend. “The fact that these appear to be river dwellers may have been one reason why they have survived so long after land animals developed, although the fact that they appear to be migrating towards the sea could mean that they are subject to predation themselves, once they get there; rather like salmon, but possibly in reverse. We have yet to establish whether they are on their way to spawn or on their way back to sea after having done so in fresh water.”

“Agreed,” said Jennifer, “but my hypothesis for the moment would be that they are on their way back to sea after breeding, on the basis that Frank’s captive is young and was relatively easy to capture.”

“Thanks, for that ‘relatively’, Jennifer,” commented Frank who was there with Anita as a far from disinterested observer. “Next time you can try to catch one.” Like most of the others

who had formed the core 'A' crew, he and Jennifer knew and liked each other, so a higher degree of banter was acceptable than might otherwise have been the case, given the danger that the settlers had recently passed through.

"I think we can accept that, Jenny," replied Michelle, ignoring Frank in a friendly way. "This is likely to be a regular migration and the stage of development of this young specimen suggests that they might have been at the spawning grounds for quite some time, perhaps much of the past year. That being the case, I wonder whether this is some explanation for the lack of large animal life on this plain. Larger land animals, as we know, need to find flowing water to drink, while smaller ones can usually rely on rain puddles and smaller streams for their water. If the annual, or even bi-annual, migration of the Crocs – for want of a better name – is something of which larger animals are aware as the result of bitter experience, they may well avoid coming to water at this point. That would explain why the only larger fauna we have seen around here are the Striches. They can safely fly overhead without risking attack."

"That seems reasonable to me," said Anton who, although a physicist, was interested in everything whatever the discipline. In fact only Rebecca, amongst the senior scientists was absent and she was too disturbed by what had happened – or worse, nearly happened – to Alexander to bother with the meeting. She was playing with her children in their cabin, allowing Alexander to play out his experience to expiate its terrors. Elizabeth was too young to be concerned, but she had caught his subdued mood and was slightly fractious.

"I suggest," Anton continued, "that we sent an expedition to investigate further up the river whether there is any evidence of larger animals where the water is too shallow for the Crocks. I will put it to the council. Perhaps this is something that Frank Fielding and George Matan can take up." After so long in command, it was difficult for Anton to step back and leave such decisions to others. But nobody minded; he had somehow assumed the role of pater familias for everyone on Home.

"I like that idea," said George, who as something of a natural explorer had sat in on the meeting. "I have been wondering how I could convince everyone to let me go hunting for wildlife, but didn't want to be seen as a potential predator. I will be quite happy to take photographs rather than pot-shots, although we may also want to trap some specimens for Michelle and Jennifer to play with. Frank, are you game?"

"I most certainly am," he replied, having already decided that Rebecca and the children would be safe as long as they stayed within the main campus. There was another reason for wanting to get away from the settlement for a few weeks. After his mutual epiphany with Anita, they had enjoyed a few very private hours together. He was concerned, however, that the difference in their ages was something that would make a more permanent relationship difficult. He was eighteen years older than she and felt that this could gradually become an issue; when he reached seventy and she would still be in her prime at 52. When he raised this with her after the meeting, she was not as dismissive as he might have hoped.

“I see what you mean Frank,” she said, “mind you, you were vigorous enough yesterday. Let me think about it for a little while and we can discuss how our relationship might develop when you get back.” Actually, she had few doubts about her feelings for Frank; he had demonstrated all the qualities that she looked for in a husband many times over. He was caring, thoughtful and great with children. And age was not a factor for her; she had seen at first-hand how devoted Charles and Rebecca had been even after the chasm in their ages had opened up during the latter part of the journey to Home – she in stasis and he taking the ‘slow route’ of wakefulness. The reason for her reluctance to make a commitment was largely based on uncertainty regarding Frank’s true depth of feeling for her. She was aware that he enjoyed her company – on several levels – and that he was a loyal companion, but did not want him to feel that just because they had become lovers, that she expected more from him. Better, she felt, for him to have his ‘boy’s own’ adventure with George and see how he felt when he got back.

The next few days were devoted to deciding on precisely where the expedition would go and what the parameters for capturing wildlife were to be. Just before they left, it was agreed that making a visual and audio record of all the animals they saw would be sufficient for research purposes, but if they came across an elderly or injured animal, they might consider bringing it back for more practical study.

Frank was particularly keen to find something that correlated to big game on Earth, as well as anything that might be useable for transport. Energy was far from being an issue for the settlers, and creating vehicles could be done very easily – as, indeed, they did for the expedition itself. However, he wanted to know whether there were animals capable of domestication that would enable them to leave a smaller footprint on the planet. “It is not,” he explained to Anita, who would be helping Rebecca look after the children while Michelle was studying the images they sent back from the expedition, “that I am worried that we could use up this planet’s resources – like we have on Earth – rather that we should start as we mean to go on, by working with the planet, not scavenging it.” He failed to notice the gentle irony that his greatest skill in the Army – and the early days of the project to get them to Home in the first place – had been as an unofficial quartermaster. Scavenging for whatever was needed to get a job done, with no questions asked, was his greatest skill.

Frank, George and Erica set off a few days later. Anita was not concerned that the attractive geologist was going off with her boyfriend; she happened to know that Erica was not really interested in men; in fact she had been the focus of the other woman’s attention herself for a short while, but in these liberated days, it had been easy to refuse any advances without giving offence, so they were still friends. But there was no reason to advertise Erica’s predilections by telling Frank.

Frank had bespoken a large vehicle for the expedition with cabins for each of them, as well as a common area and room for storage. Size was useful should they meet anything large

that appeared threatening and speed was not an issue, although this lorry was capable of speeds of up to 60kph on level ground and an impressive 40kph over rough terrain, in the latter case thanks largely to the halftrack configuration that had worked for them before. The living accommodation was Spartan but comfortable and they did not expect to be away for more than a week or so. They took plenty of food supplies although Frank was determined to try living off the land to some extent. In doing so, he was encouraged by the positive results from early analysis of the plant life, as well as of the one or two small animals and fish they had captured. Nothing so far had proved to be toxic to the human metabolism, although one or two plants had proved unpleasant, and not all of the settlers were carnivores in any event so only a few indigenous animals had been tried so far; besides they had brought stock with them for food and other produce. Eating some larger 'local' animals was a private objective of Frank's, with which he knew George agreed. And Erica seemed game for anything, he thought.

The first few hours were more or less uneventful. They started by following the route that Erika had chosen for her initial geological survey, but because they did not need to study the terrain itself, progress was much more rapid and they were into 'uncharted' territory within two hours. The word uncharted was not strictly accurate, because the aerial survey of the entire planet taken before landing gave them a detailed map of the area. In addition, one of the first jobs Anton, as leader, had ordered was the launching of several satellites into geostationary orbit, to provide triangulation for GPS systems. There might be no roads to follow, but knowing how to get back to the settlement in the quickest possible time was deemed important and this also gave them a constant visual representation of the terrain and main geographical features such as the mountain range that was running to their right, as they moved up the valley, and the track of the river itself. The satellites would be added to as the settlement expanded into new areas and, eventually, the other two continents. But that was still in the – possibly quite remote – future.

The ground was largely covered by the ubiquitous blue-green grass, but they gradually saw more and more trees. Frank was surprised that these were so similar to what he had seen on Earth, but Erica soon disabused him, but insisting that they stopped after four hours and went to look at one of them. Instead of the bark so common on Earth, here the trunks were more feathery in nature and, they suspected, totally unsuitable for construction or any other use.

"This could be one reason why we see no evidence of civilisation – other than Frank's cylinder," suggested George. "Perhaps whoever made that had few natural building materials and had to dwell underground."

"Perhaps," replied Erica, "but in the absence of any other evidence so far, it could just as equally be that they built with alternative materials that blend into the planet's surface and we simply can't see them yet. In any case, this is unlikely to be the only form of tree we see. Let's defer judgement."

At another stop later on, they found a tree that was more like what Frank had been expecting. The outcrops they had seen were a long way from the settlement, which is why they had been unobserved previously, being below the horizon. It was interesting to see that these growths were significantly taller, broader and stronger than the first they had come across, and had a smooth surface. They also grew closer to the river, which was slightly narrower by now.

“This will provide cover for herds of animals from possible predators,” said Frank, leaning over the water. “Let’s see if we can see any Crocks in the river. Wow,” he exclaimed almost immediately, “That one is even larger than any of the first lot we saw near the settlement. It must be at least five metres long and is much thicker set. If the water was not so clear, we would not have been able to see it. How much further upstream can they go?” he mused, rhetorically.

The final drive of the day took them more than 200 kilometres away from the settlement; further than anyone had travelled by some margin. But they were in constant contact and Michelle was interested to see pictures of the new Crocks. It was she who noticed the strange background sounds on the recording.

“Frank, do you think the Crocks are communicating in some way?” she asked.

Frank listened for some time to the recorded murmuring sound before answering. “It is impossible to say, Michelle,” he replied. “Erica is with me and she does not think it is structured. If anything the sounds are coming from further away – and are all around us. I have heard sounds like this in the jungles of Earth, but not on plains like this.”

When George finally brought the vehicle to a halt for the day, close to the river, they noticed that one of the trees had fallen across it making a natural bridge.

“That is wide enough for quite a large animal to cross the river,” suggested Anita, who was by now also monitoring the broadcast, showing Alexander what Uncle Frank was doing. “How strong does it look?”

Erica had some of her geological equipment with her and went to measure the strength of the trunk. “My God, she exclaimed, “it is not a tree at all, it is solid rock. No, wait, it was a tree, it is simply petrified.”

“So would I be if some large animal walked across me,” quipped Frank.

“You know what I mean, Frank,” replied Erica, uncertain how to take him, as they returned to the vehicle to look at her samples. “It has turned from wood into stone over a very long time; but that implies that the area was once covered by a massive amount of rock that compressed the wood before it became calcified. The landscape must have changed drastically over millennia. More importantly, from our perspective, is that this is the first potential evidence we have that animals could have crossed the river without threat from the Crocks.”

“I will pass that on to Michelle,” said Anita, “she has gone to play with Elizabeth. Can you see any other evidence of migration?”

“You mean will I go and look for animal dung,” said Frank, in mock horror. “What sort of a man do you think I am?”

“Resourceful, darling” came the reply. That was a first, thought Frank; she called me that in front of everyone. Perhaps there is a chance for us after all. But before he could reply, there was a crashing noise and a small herd of elephant-sized animals appeared as if out of nowhere, not far behind their parking place. Enraged by the sight of an even larger beast – the halftrack – by their river crossing, the leader of the herd was clearly enraged and preparing to charge them. It was covered in hair, had six limbs; two at the front that were smaller than the four larger ones at the back. The reason for this became apparent as soon as it neared the halftrack at the end of its fifty metre charge. It drew up beside them and reared on its hind four legs, which formed a highly stable base, while using its front limbs to batter against the vehicle.

Erica let out a strangled cry of disgust, as she saw the animal’s tooth-filled jaw, apparently dripping with blood from its most recent meal, gaping threateningly towards them.

“Clearly not an herbivore, then,” said Anita, who could see developments from the safe distance of several hundreds of kilometres. She was not concerned for their safety; she knew that the vehicle was robust – and she was also well aware of how capable Frank was in a crisis. Discretion being the better part of valour, George slammed the lorry into reverse and gunned the engine into life. Whether it was the unaccustomed noise, or the immediate retreat of its enemy, the animal immediately calmed down. Anita was fascinated by the rapidity with which the animal did so; she called for Jennifer to come and see the pictures.

“Wow, Frank, that is great,” the exobiologist said, as she watched the replay. “Can you get your Super Ant to sit up and beg again?”

“Remind me again, Jennifer,” he replied. “Why did we rescue you from Xavier’s clutches, back at UNSA?” The United Nations Space Agency had not always been a supporter of the project, even if the Jesuit had come through for them in the end.

“If I remember correctly, you needed me to spy on him, Frank,” she said sweetly, while they all started to analyse the images.

As darkness fell, the team in the halftrack were gradually engulfed with a wide variety of wildlife of varying sizes, shapes and colours. None appeared to be threatening, now that they were well away from the stone-tree bridge, but they kept a wary eye on the Super Ants, as Jennifer had called them, in reference to their limb configuration and tendency to rear up when threatened. George decreed that they would remain in the van; which was a good idea, because the herd of Super Ants had apparently settled there for the night.

“Just as well you built in a bathroom, Frank,” said Erica, “A girl needs some privacy.”

“So does a boy,” he retorted, “so no peeking.”

Early the next morning, they witnessed an even more amazing sight. A varied host of other animals had gathered by Stone Tree Bridge – the feature had gained the status of a proper noun during the night, as they discussed its significance – ready either to drink in its relative safety, or to cross to the other side of the river. The animals were of all shapes, sizes and colours, not to mention types of covering; some were feathered, others were fur covered while some sported hide skins. Frank quickly turned on the camera and transmitted the images back to the settlement, hoping that someone was monitoring the channel. As he started to describe what they were looking at – he knew that the transmission was being recorded, even if nobody was watching live – he was gratified to hear Anita’s voice come back to him.

“I hope you slept well, darling,” her dulcet tones filling him with warmth. “What do you want to show me?”

“We can discuss that later, dearest,” he replied, testing a new word for him, “for now, there are lots of new species to look at. For the record, it is worth noting that while none appear to be directly analogous to what we might have seen on Earth, nothing is totally alien, either. With George’s approval – and help – I intend trying to capture something not too large later on to bring back for detailed analysis. I know we do not want to dissect anything that has not died of natural causes, but I imagine that Jennifer and Michelle can do some DNA analysis of these animals to see how much they differ from what we see on Earth. I rather suspect that there will be few significant differences, just evolutionary variations.”

“That is very insightful, Frank,” replied Michelle, who had heard Anita’s voice and come in to listen to the conversation. “What makes you think that?”

“To be honest,” he said, “I am not at all sure. It just seems to me that a planet so similar to Earth is likely to produce life that is also not too unlike our own. Not,” he added hastily, “that I am expecting to walk into a bi-pedal ape descendant who talks with a funny accent within the next few days – well other than Henry Yates, that is.”

“I am not sure that is the best way to refer to the new ‘Dean of the Arts Faculty,’” said Anita, telling Frank that the University was now up and running. “I know you’ve only been away for one day, but things are moving fast on the academic front, here. Rebecca has been elected as sub-Dean of the Science Faculty, while Anton is Chancellor.”

“That is all great news,” replied Frank, who was not really too interested in such matters, but knew that Anita was. “It probably means that you and I will get to spend even more time with Alexander and Elizabeth,” he added, wondering if they might ever have children of their own; something he had never in his entire life considered possible.

“Come back soon,” were Anita’s last words, before handing over to Michelle, for more detailed discussion about the creatures and possible capture of one.

“You made an interesting point about the DNA similarities, Frank,” Michelle said. “That would be consistent with research suggesting that microscopic life has been travelling between solar systems, possibly even galaxies, for billions of years, as passengers on meteorites ejected from planets by massive volcanic explosions or collisions with other bodies. It is not unreasonable to imagine that from identical roots, similar conditions would produce roughly analogous life forms.”

When they had satisfied all the scientist’s short term questions, George and Frank went outside to see what scope there was for capturing an animal for further investigation. Erica was just as interested in what they were doing and, having overcome her distaste over the Super Ant’s rather antisocial eating habits – they clearly did not use napkins to wipe their mouths after feeding – she joined them to discuss which creature might be most suitable.

“You will probably want to capture something that is not too large. Or smelly,” she added, catching a whiff of excrement on the breeze. “We have to bring it back a long way with us, so we have to consider the space available to us.” This was a good point, although Frank had his own ideas on the matter that he did not wish to share, at least initially. They were able to move relatively easily amongst the various herds. The humans were too small to be competition for the larger animals, and the smaller ones clearly treated them as just another species; not to be considered a threat until they got too close, or made rapid movements. Frank was particularly interested in a group made up of animals of which the more mature appeared to be about the same size as a horse, but with a shorter neck.

“George,” he said quietly, “do you think that we might be able to cut out one of the juveniles without alarming the rest of the herd? I was wondering if that might make a good subject for Michelle and Jennifer to study.”

“We could try,” replied the expedition leader. “I have seen it done on my family’s farm in South Africa, but left to join the Navy too early to have had the opportunity to try it for myself.”

“I too have seen it done,” said Frank. “I wish Charles were here, he had a natural affinity with horses.”

“It never ceases to amaze me just how many different skills that man possessed,” commented George under his breath, as they got closer to the group they were interested in. He had spent some years with Charles during the time when he himself had been Captain of one of the crews – George had formerly been one of the youngest submarine commanders in his country’s Navy – and had come to respect the older man greatly. “Was there anything he could not do?”

“Pass on some skills to me, I fear,” said Frank as the Horses, as he thought of them, started to spook a little and move away. George started to hum a tune, quietly at first and then with an increasingly loud reedy tenor tone. It seemed to sooth the animals who, reasoned, Frank, could surely never have heard anything like it before. Later Michelle suggested that the sound

of any form of music might reflect the natural melodies of the body and thus have a comforting effect on wild animals in the same way as the sounds made by their mother's might, particularly while in the womb. As the two men walked gently towards the smallest of the animals, Erica suddenly walked up behind them, through the gap they had left so that they did not appear like a larger animal, and then strode purposefully towards the 'foal' they had targeted. It moved comfortably towards her and started to nuzzle her outstretched hand. She stroked the creature's fur – it lacked the mane of a horse, but was covered with a downy coat that looked as if it would thicken with maturity – and stood so that it could see her standing alongside it, rather than head on. It worked and she gently led it away from the rest of the herd.

Michelle, who had been watching from the vantage point of a camera that they had left on the lorry, programmed to follow their movements, was intrigued to see that there was apparently no strong bond between the young and its parent. She wanted to ask Frank to see if there was any reaction from the herd at all, but was unwilling to make the noise necessary for questions. Instead, she watched enthralled as the three humans led the docile creature back towards the halftrack lorry.